U.S. Application No. 10/571,315

Attorney Docket No.: 029929-00025

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1-8. (Canceled)

9. (Previously Presented) A method for the preparation of metal nano-

particles comprising the steps of dissolving, in a non-polar solvent, one of an

organic metal compound of a fatty acid, a metal complex of an amine wherein the

amine is an aliphatic amine having a linear or branched structure or a mixture of

the organic metal compound and the metal complex, and adding a reducing

agent to the resulting liquid in order to reduce the liquid to thus give metal nano-

particles,

additionally while adding the reducing agent introducing, into the liquid,

hydrogen gas, carbon monoxide gas, a hydrogen-containing gas or a carbon

monoxide-containing gas,

after the adding the reducing agent, adding deionized water to the liquid,

followed by stirring the resulting mixture and then allowing the mixture to stand

so that impurities present in the liquid are transferred to a polar solvent and that

the impurity concentration in the non-polar solvent is reduced.

10. (Canceled)

11. (Canceled)

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12. (Previously Presented) The method for the preparation of metal nano-

particles as set forth in claim 9, wherein the size of the metal nano-particles is not

less than 1 nm and not more than 100 nm.

13. (Previously Presented) The method for the preparation of metal nano-

particles as set forth in claim 9, further including the steps of concentrating the

mixture containing the metal nano-particles and then re-dispersing the metal

nano-particles, to thus control a concentration thereof to a level of not less than

5% by mass and not more than 90% by mass.

14-20. (Canceled)

21. (Previously Presented) The method for the preparation of metal nano-

particles as set forth in claim 9, wherein the organic metal compound is adhered

to the periphery of each metal nano-particle as a dispersant, and

wherein the organic metal compound is an organic metal compound of a

fatty acid, a metal complex of an amine or a mixture of an organic metal

compound of a fatty acid and a metal complex of the amine.

22. (Previously Presented) The method for the preparation of metal nano-

particles as set forth in claim 21, wherein the fatty acid is at least one member

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selected from the group consisting of C_6 to C_{22} saturated fatty acids and

unsaturated fatty acids, each having a linear or branched structure.

23. (Previously Presented) The method for the preparation of metal nano-

particles as set forth in claim 21, wherein the fatty acid is at least one fatty acid

selected from the group consisting of hexanoic acid, heptanoic acid, octanoic

acid, nonanoic acid, decanoic acid, undecanoic acid, dodecanoic acid, tetra-

decanoic acid, eicosanoic acid, docosanoic acid, 2-ethyl hexanoic acid, oleic

acid, linoleic acid and linolenic acid.

24. (Previously Presented) The method for the preparation of metal nano-

particles as set forth in claim 21, wherein the amine is an aliphatic amine having

a linear or branched structure.

25. (Previously Presented) The method for the preparation of metal nano-

particles as set forth in claim 24, wherein the amine is at least one member

selected from the group consisting of hexylamine, heptylamine, octylamine,

decylamine, dodecylamine, 2-ethyl-hexylamine, 1, 3-dimethyl-n-butylamine, 1-

amino-undecane and 1-amino tridecane.

26. (Currently Amended) A method for the preparation of a metallic wire

or a metal film comprising the steps of coating, onto the surface of a base

material a dispersion containing metal nano-particles prepared by dissolving, in a

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non-polar solvent, an organic metal compound of a fatty acid wherein the fatty

acid is at least one member selected from the group consisting of C6 to C22

saturated fatty acids and unsaturated fatty acids, each having a linear or

branched structure, a metal complex of an amine wherein the amine is an

aliphatic amine having a linear or branched structure or a mixture of the organic

metal compound and the metal complex, and adding a reducing agent to the

resulting liquid in order to reduce the liquid to thus give metal nano-particles,

additionally while adding the reducing agent introducing, into the liquid,

hydrogen gas, carbon monoxide gas, a hydrogen-containing gas or a carbon

monoxide-containing gas,

after the adding the reducing agent, adding deionized water to the liquid,

followed by stirring the resulting mixture and then allowing the mixture to stand

so that impurities present in the liquid are transferred to a polar solvent and that

the impurity concentration in the non-polar solvent is reduced, followed by drying

and then firing the coated layer of the dispersion to thus form a thin metallic wire

or a metal film having conductivity.

27. (Previously Presented) The method for the preparation of a metallic

wire or a metal film as set forth in claim 26, wherein the temperature of the firing

step ranges from 140 to 300°.

28. (Previously Presented) A metallic wire prepared according to the

method as set forth in claim 26.

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29. (Previously Presented) A metal film prepared according to the method

as set forth in claim 26.

30. (Currently Amended) A method for the preparation of a metallic wire

or a metal film comprising the steps of coating, onto the surface of a base

material, a dispersion prepared by a method comprising the steps of dissolving,

in a non-polar solvent, one of an organic metal compound of a fatty acid wherein

the fatty acid is at least one member selected from the group consisting of C6 to

C₂₂ saturated fatty acids and unsaturated fatty acids, each having a linear or

branched structure, a metal complex of an amine wherein the amine is an

aliphatic amine having a linear or branched structure or a mixture of the organic

metal compound and the metal complex, and adding a reducing agent to the

resulting liquid in order to reduce the liquid to thus give metal nano-particles and

then re-dispersing the metal nano-particles, to thus control a concentration

thereof to a level of not less than 5% by mass and not more than 90% by mass.

additionally while adding the reducing agent introducing, into the liquid,

hydrogen gas, carbon monoxide gas, a hydrogen-containing gas or a carbon

monoxide-containing gas,

after the adding the reducing agent, adding deionized water to the liquid,

followed by stirring the resulting mixture and then allowing the mixture to stand

so that impurities present in the liquid are transferred to a polar solvent and that

the impurity concentration in the non-polar solvent is reduced, followed by drying

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and then firing the coated layer of the dispersion to thus form a thin metallic wire

or a metal film having conductivity.

31. (Previously Presented) The method for the preparation of a metallic

wire or a metal film as set forth in claim 30, wherein the temperature of the firing

step ranges from 140 to 300°.

32. (Previously Presented) A metallic wire prepared according to the

method as set forth in claim 30.

33. (Previously Presented) A metal film prepared according to the method

as set forth in claim 30.

34. (Previously Presented) A method for the preparation of a metallic wire

or a metal film comprising the steps of coating, onto the surface of a base

material, a metal nano-particle-containing dispersion prepared by a method

comprising the steps of dissolving, in a non-polar solvent, one of an organic

metal compound of a fatty acid wherein the fatty acid is at least one member

selected from the group consisting of C₆ to C₂₂ saturated fatty acids and

unsaturated fatty acids, each having a linear or branched structure, a metal

complex of an amine wherein the amine is an aliphatic amine having a linear or

branched structure or a mixture of the organic metal compound and the metal

complex, and adding a reducing agent to the resulting liquid in order to reduce

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the liquid to thus give metal nano-particles and then again dispersing the metal

nano-particles to thus give a dispersion of metal nano-particles having a metal

nano-particle concentration of not less than 5% by mass and not more than 90%

by mass, followed by drying and then firing the coated layer of the dispersion to

thus form a thin metallic wire or a metal film having conductivity,

additionally while adding the reducing agent introducing, into the liquid,

hydrogen gas, carbon monoxide gas, a hydrogen-containing gas or a carbon

monoxide-containing gas,

after the adding the reducing agent, adding deionized water to the liquid,

followed by stirring the resulting mixture and then allowing the mixture to stand

so that impurities present in the liquid are transferred to a polar solvent and that

the impurity concentration in the non-polar solvent is reduced.

35. (Previously Presented) The method for the preparation of a metallic

wire or a metal film as set forth in claim 34, wherein the temperature of the firing

step ranges from 140 to 300°.

36. (Previously Presented) A metallic wire prepared according to the

method as set forth in claim 34.

37. (Previously Presented) A metal film prepared according to the method

as set forth in claim 34.